

Date: Wed, 18 Aug 93 16:34:10 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #989  
To: Info-Hams

Info-Hams Digest                      Wed, 18 Aug 93                      Volume 93 : Issue 989

Today's Topics:

        "QSL-Routes" free of charge test  
        'Diversity Operation'? (2 msgs)  
    A strange thing that happens when you are learning code  
        Code learning questions  
        Drake TR4C Tuneup help needed.  
        Help!...RF Everywhere!  
            HW101 Mods  
    Kenwood SP100 external speaker unit wanted...  
        Motorola Maxar 800 help?  
    Need information on duplexers (2 msgs)  
        Radio Shack GMRS radios  
    Urgent...FAQ/Basic Information on HAM needed. (3 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.  
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Date: Wed, 18 Aug 93 10:29:17 GMT  
From: usc!howland.reston.ans.net!xlink.net!math.fu-berlin.de!news.dfn.de!  
hpux.rz.uni-jena.de!news.tu-ilmenau.de!systemtechnik.tu-ilmenau.de!  
tom@network.ucsd.edu  
Subject: "QSL-Routes" free of charge test  
To: info-hams@ucsd.edu

TEST THE "QSL-ROUTES" - THE WORLD ANNUAL OF QSL MANAGERS - NOW !

The editor of "QSL-Routes - World Annual of QSL Managers" offers  
a free of charge test of this QSL manager directory. The 3rd edition

contains more than 60000 qsl managers.  
If you want to get a free of charge test of "QSL-ROUTES"  
2nd edition 1992 + supplements 1992 (or 1993 edition)  
you can write a letter to:

Theuberger Verlag GmbH  
P.O.Box 73  
D-10122 Berlin  
Germany

You should include 2 US\$ or 3 IRC or 3 DM (stamps) at least  
for surface mail. Address labels are helpfully.

As a service for the net users I provide the 1993 supplements  
on ftp server ftp.tu-ilmenau.de (141.24.8.28), path pub/msdos/ham/qslroutes.  
The supplements for January to June 1993 are available yet and  
it will be continued.

Feel free to enclose more if you find it worth more than 2 US\$  
for the return postage.  
All your donations will help to build up the first PacketCluster  
Node in former Eastern Germany (qth:Ilmenau, DB0XDX, sysop DL5ATP).

TNX! 73 de DL5ATP

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+-----+
| Thomas Planke                               Planke@Systemtechnik.TU-Ilmenau.DE |
| - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - |
| Technical University Ilmenau                Phone: +49 3677/69-1465 |
| Dept. of Automation and Systems Engineering Fax:   +49 3677/69-1446 |
| PF 327, Am Ehrenberg, D-98684 Ilmenau, Germany |
| - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - |
|                                           (PacketRadio: DL5ATP@DB0RSV.DEU.EU ) ex: Y32JK |
+-----+
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Date: 18 Aug 1993 13:23:59 GMT  
From: munnari.oz.au!comp.vuw.ac.nz!newshost.wcc.govt.nz!  
GARDNER\_A%kosmos.wcc.govt.nz@network.ucsd.edu  
Subject: 'Diversity Operation'?  
To: info-hams@ucsd.edu

There are (to my knowledge), 4 different methods of diversity reception,  
all with different advantages. Some of them work better on >30MHz while  
others are more suited to data than voice transmissions. Frequently,  
more than one method can be used at once.

## 1. Frequency diversity

This is where 2+ receivers are tuned to two different frequencies carrying the same programme. The theory is that when one frequency is in a null, the other will hopefully be not in a null! This method saves space at the receiving site, as only 1 antenna is required. The transmit site, however, has to run 2 transmitters. Transmitters aren't cheap and consume power!

## 2. Space diversity

THIS is where 2+ receivers are attached to aerials that are physically separated by (usually) a multiple of wavelengths. The theory is that while one antenna is in a null, the other isn't. Only one transmitter is required, but you may need a fair amount of real estate for the receive aerials!

## 3. Polarization diversity

Due to size constraints, I think this is used mainly >30MHz. The theory is that while signals of a horizontal polarisation may be in a null, signals of a vertical polarisation won't be. Many microwave links over water use this method combined with space diversity.

## 4. Time diversity

THIS is where 2 signals are sent from 1 transmitter to 1 receiver at different times (i.e. the programme is re-run). Once at the receive end the 2 signals are combined and any nulls (hopefully) are cancelled. Doesn't work too well for voice, more suited to data, I think.

I recall that the HF receiving station I used to work at here in New Zealand had a triple diversity receiving unit. This was 3 RCA AR-88's in a 19 inch rack with a common IF unit that would select the strongest signal. You could use it for space or frequency diversity. We had 2 HF vee array towers spaced approx 1 mile apart. Each tower had around 24 Vee aerials running off it at all directions of the compass. This was a fun machine to drive!!!

Andy Gardner,  
Wellington, New Zealand  
Te Whanga-nui-a-Tara, Aotearoa

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Date: Wed, 18 Aug 1993 13:34:18 GMT

From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!torn!nott!cunews!  
freenet.carleton.ca!Freenet.carleton.ca!ae517@network.ucsd.edu  
Subject: 'Diversity Operation'?  
To: info-hams@ucsd.edu

In a previous article, jkearman@arrl.org (Jim Kearman) says:

>In rec.radio.shortwave, mwandel@bnr.ca (Markus Wandel) writes:  
>>This may be a FAQ, and yes, I am one who unsubscribes to these groups when  
>>nothing interesting passes by for a while so I may have missed it in the past.  
>>I am wondering about 'Diversity operation'.  
>>  
>

Well, there are at least three types of diversity reception; space diversity, frequency diversity and time diversity. If you are listening to the same broadcast on two different frequencies, this would most likely be frequency diversity. Space diversity would be akin to listening to the same frequency with different antennas. The only example of time diversity that I could come up with would be forward error correction telex over radio, where everything is sent twice at different times; I'm certain there must be other examples.

I recently saw an interesting article where space diversity was used for INMARSAT standard 'C' communications. Two antennas were mounted at different heights on a fishing trawler's mainmast, and apparently resulted in much improved reception of the satellite in areas of marginal coverage.

73

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Russ Renaud   ve3uav/aa8lu   1 Internet: ae517@freenet.carleton.ca  
CCG-Fleet                               1                               or  
tel (613) 993-2479                      1                               ve3uav@amsat.org  
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Date: 18 Aug 93 18:51:59 GMT  
From: psinntp!pixar!bruce@uunet.uu.net  
Subject: A strange thing that happens when you are learning code  
To: info-hams@ucsd.edu

Well, I've been practicing code for an hour or more every day for a month or two, and can now copy in my head at 17 WPM, after having vented my frustration to the entire net last week over being stuck at 13 WPM.

A few days ago, I was in my car and my radar detector started saying "T T TT T". I remember wondering why the manufacturer would have it say

"T", and then I realized that it was simply beeping. I had a full-blown case of CW on the brain. I wonder if I am going to hear beeping sounds as letters from now on, whether I want to or not? It does seem that as soon as you develop this particular kind of insanity, you can copy faster!

Without joining the code/no-code argument for the moment, I have to admit that the rig and key are sitting right in front of me and I haven't had the motivation to make a single CW contact yet. My favorite mode is still packet.

Bruce Perens KD60TD

Date: Wed, 18 Aug 1993 11:18:19 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!sgiblab!sgigate!odin!  
chuck.dallas.sgi.com!adams@network.ucsd.edu  
Subject: Code learning questions  
To: info-hams@ucsd.edu

```
In article <CBxExw.2x@fc.hp.com>, perry@fc.hp.com (Perry Scott) writes:  
...stuff deleted...  
> It took me about four months of 30 minutes/day practice. I understand  
> your frustration. I hit a wall at about 15 wpm. I got through it by  
    ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ about right for everybody  
...stuff deleted....  
> : 2. I see claims about copying at astounding rates, some claim 75 WPM.  
> : Can these people copy random character groups at this speed?  
>  
> It's probably an inflated ego talking. 75 wpm is probably the 99.99%ile  
> on the planet.
```

no, no random character groups at this speed. probably 98.00% ;-)  
not ego, just 35 yrs of experience. :-) the only random character groups  
you hear on the air (at least legally) is call-signs.

```
...more deleted...
|> Wheel-of-Fortune(tm) method. Part of learning higher speeds is to
|> abandon the anal-retentive idea of copying every character. If the
|> letter doesn't immediately come to mind, forget it - it's better than
|> trying to remember it and missing the next two. Later analysis of your
```

```
---good advice.  if you copy 100%, you're going too slow.  speed up.
```

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|> missed letters will tell you what you need to put in your random letter
|> groups. :-)
```

|>  
|> : 4. Is there a "Farnsworth" variation where it is the word space that is  
|> :     lengthened rather than the character space? I would think that this  
|> :     would aid training in word recognition. Is there any PC software  
|> :     that implements this?  
|>  
|> I abandoned Farnsworth at 13 wpm because our local testing team does not  
|>     ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ best advice of all. i've never used  
|>     Farnsworth, they didn't have it when i started. when you get to the air  
|>     waves, you aren't going to find anyone using it, except for the occasional  
|>     bug user. ;-) if you can copy without Farnsworth, then you can copy with.

|> :     Bruce Perens KD60TD

|> Perry Scott  
|> AA0ET

Bruce, are you writing or printing? start immediately to write as printing  
takes more effort - like lifting the pen, etc. print a sentence and then  
write it. which takes longer? QED

good luck and keep up the good work.

73 de k5fo     dit     dit

--  
-----cut here-----

Chuck Adams, K5FO - CP60  
adams@sgi.com

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Date: 18 Aug 93 11:51:30 -0500  
From: envoy.wl.com!reeve.research.aa.wl.com!aa.wl.com!weinkar@decwrl.dec.com  
Subject: Drake TR4C Tuneup help needed.  
To: info-hams@ucsd.edu

I just purchased a Drake TR4C, and am a little unclear on the tune up  
procedure. Can someone give it to me, with a little explanation as to what  
each function is performing? (The manual is badly copied, and I seem to be  
missing some info, it's unreadable.)

-----

Date: 18 Aug 93 21:05:00 GMT  
From: ogicse!hp-cv!hp-pcd!hpspkla!depaul@network.ucsd.edu  
Subject: Help!...RF Everywhere!  
To: info-hams@ucsd.edu

Hello.

I wonder if anyone on the net can help me with my RF problem...

#### Background

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I'm using a TS440 hooked up to a coax air balun (18 feet of RG58U single layer wound) which feeds a balanced antenna tuner (a variable L on each leg of the 450 ohm prefab ladder line, with a variable capacitor across the output). The two antennas I use with this tuner are a vertical and a 560 foot loop. I'm using polyethylene tubing over the ladder line over the first 10 feet or so of both feeds to the two antennas. This tubing starts at the output of the tuner and insulates the feed from metal. The following problems occurred without the tubing also.

Here in Eastern WA we have (or at least I do) rocky soil.

#### Problem

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When I get on 40 meters the rig TURNS OFF when I bring the power up to 100 watts. No other band at this point does this. This happens only for the vert. I've done a band-aid fix, which I don't want to keep, that is take all other plugs that are going into the same outlet and move them to another electrical outlet. The problem goes away.

On all bands I have another problem: when using my outboard speech processor at even a very light setting of 6 db, my voice is horribly distorted with tones, clicking, and no audio all together. On CW I get chirping from time to time. When I switch to a dummy load there are no problems. These problems happen on both antennas.

Please help me on this...This is driving me nuts.

Thank you,

Marc DePaul

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Date: Wed, 18 Aug 1993 15:39:19 GMT

From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!vixen.cso.uiuc.edu!  
usenet.ucs.indiana.edu!silver.ucs.indiana.edu!djadams@network.ucsd.edu

Subject: HW101 Mods

To: info-hams@ucsd.edu

Greetings! I was wondering if anyone knew of any useful

mods for the HW-101. Were any run in QST? Well, if you know of any and can provide the info or reference, I'd appreciate hearing from you.

Dave

PS - Does the "Hot Water" term have any significance or just basically a not-so-catchy ad line?

David J Adams Internet: djadams@silver.ucs.indiana.edu  
Amiga User and Flow Cytometry Advocate  
Looking for a Kenwood TS520s and a mobile 2m rig  
Conure Society of America. "Push the button Frank"

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Date: Wed, 18 Aug 1993 17:07:24 GMT  
From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!spool.mu.edu!  
nigel.msen.com!yale.edu!cs.yale.edu!ccsua.ctstateu.edu!white@network.ucsd.edu  
Subject: Kenwood SP100 external speaker unit wanted...  
To: info-hams@ucsd.edu

Hi  
I'm looking for a Kenwood SP-100 external speaker unit, new or used. Help?  
Thx  
Harry  
white@csusys.ctstateu.edu

-----  
Date: 16 Aug 1993 15:58:37 GMT  
From: lerc.nasa.gov!lerc.nasa.gov!news@purdue.edu  
Subject: Motorola Maxar 800 help?  
To: info-hams@ucsd.edu

I recently purchased a low band Motorola maxar 800 to convert to 6m FM. I have the proper model, (the 42-50 mhz split), the xtals, a signal generator, and experience in aligning radios, but no manual or alignment instructions. Can anyone out there help out? tn timer George.

Voice # 216-433-8473 "views expressed are personal  
Ùfax# 216-433-6106 and not those endorsed by NASA"  
packet ke8yx@no8m.neoh.usa.na



Date: 18 Aug 1993 21:16:05 GMT  
From: nothing.ucsd.edu!brian@network.ucsd.edu  
Subject: Need information on duplexers  
To: info-hams@ucsd.edu

jdwhite@iastate.edu (Jason White) writes:

> I would like to learn more about duplexers and how to maintain and  
>"configure" them. Any suggestions on where I might look for some good  
>information.

If you can find the "FM and Repeater Handbook" by Ken Sessions K6MVH,  
(out of print, but probably to be found in a big library)  
there is a pretty good section on duplexers there. There is also some  
information in the ARRL repeater handbook.

Also, call the various duplexer manufacturers and ask their customer  
service people if you could have a copy of the tuning instructions for  
their product. Many of these are actually a good introduction to the  
way the duplexer works.

In general, assuming that the coupling cables between cavities aren't  
missing, tuning will only require a good quality signal (a one-watt  
walkie works fine for me), a dummy load, and a receiver with a usable  
S-meter.

If the duplexer is a pass-notch type, you have to peak all the pass  
cavities, then null the notches. You repeat this several times.  
Typically the pass tuning is the one in the center of the bottle; the  
notch is the slug off to the side or the sliders on the side.

Notch-only duplexers are simpler: you just null all the notches.

60 db isolation is minimum; I regularly see 70 to 90 db after several  
rounds of tweaking the bottles.

Have fun!  
- Brian

-----

Date: 18 Aug 93 19:56:48 GMT  
From: ogicse!uwm.edu!cs.utexas.edu!swrinde!elroy.jpl.nasa.gov!merlin.JPL.NASA.GOV!  
no6b@network.ucsd.edu  
Subject: Need information on duplexers  
To: info-hams@ucsd.edu

In article <CBY9x3.IGt@news.iastate.edu> jdwhite@iastate.edu (Jason White) writes:  
> I would like to learn more about duplexers and how to maintain and

>"configure" them. Any suggestions on where I might look for some good  
>information. I looked in the '92 Handbook, but all I found was a paragraph on  
>what duplexers were; nothing on how to maintain them.  
>

Try the ARRL publication "FM & repeaters". Don't know how well they've been updating it recently but in the past it's been way out of date. However, there were instructions in the 1980 printing on how to build one, & duplexer technology doesn't change much over the years. In what way do you want to "maintain" your duplexers? Once they are tuned they generally don't require any tinkering.

-----  
Date: Wed, 18 Aug 1993 21:43:25 GMT  
From: loral!h1b@network.ucsd.edu  
Subject: Radio Shack GMRS radios  
To: info-hams@ucsd.edu

If anyone is either using or familiar with the Radio Shack GMRS handie talkies that operate in the 400Mhz range. I'm considering getting a pair and would appreciate any operational or technical feedback.

Thanks,  
h1b@li.loral.com

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Date: 18 Aug 93 19:18:59 GMT  
From: ogicse!uwm.edu!wupost!news.miami.edu!usenet.ufl.edu!elm.circa.ufl.edu!abhijit2@network.ucsd.edu  
Subject: Urgent...FAQ/Basic Information on HAM needed.  
To: info-hams@ucsd.edu

Help ! I need the FAQ / Basic information for starting out on HAM-radio. If there is an FAQ for this newsgroup regarding licences ,equipment, tips for beginners etc, please mail it to me.

Thanks in advance.

-----Abhijit Kakhandiki

-----  
Date: 18 Aug 93 14:29:42 GMT  
From: gatech!howland.reston.ans.net!wupost!news.miami.edu!usenet.ufl.edu!

elm.circa.ufl.edu!abhijit2@RUTGERS.EDU  
Subject: Urgent...FAQ/Basic Information on HAM needed.  
To: info-hams@ucsd.edu

I need some basic info. on ham-radio as I am starting out on it and literally know nothing about it. Please mail me the info. about getting a license etc in the United States. Where do I apply ? What is the procedure ? etc.

Also does someone have the list of all the ham organizations in USA. I am thankful to the persons who will mail me the info. requested.

-----Abhijit Kakhandiki

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Date: 18 Aug 93 19:56:08 GMT  
From: sgigate!odin!jerber.sandiego.sgi.com!jerryb@RUTGERS.EDU  
Subject: Urgent...FAQ/Basic Information on HAM needed.  
To: info-hams@ucsd.edu

In article <24tecmINNop4@no-names.nerdc.ufl.edu>, abhijit2@elm.circa.ufl.edu (Abhijit Kakhandiki) writes:

|> I need some basic info. on ham-radio as I am starting out on  
|> it and literally know nothing about it. Please mail me the info. about  
|> getting a license etc in the United States. Where do I apply ? What is  
|> the procedure ? etc.

|>  
|> Also does someone have the list of all the ham organizations  
|> in USA. I am thankful to the persons who will mail me the info.  
|> requested.

|>  
|> -----Abhijit Kakhandiki  
|>

URGENT??

Oh well, here goes... You'll need to take a test(s) to get your ham license. To prepare for the test, you'll need study materials. Those are commonly available in great quantities in your local retail Amateur Radio store in your local area.

Look in your telephone directory's yellow pages under 'Radio, Amateur, Supplies'.

Go into that local amateur radio store (ham radio store) and they will have a selection of books and audio tapes you can study and listen to. A

recommended set of text books and tapes is made by Gordon West.

If you want to have VHF/UHF privileges only, (very difficult to talk outside of your local area), then go for the 'TECHNICIAN' class license. There is a minimal test on electronic/radio theory, and no need to learn the Morse code.

The next step up is the NOVICE class license, which has more limited VHF/UHF privileges than the Technician class license, but offers HF (lower) frequencies very suitable for communications around the world. You'll need to learn the Morse code, and be able to receive Morse code at a minimum of 5 words per minute. Though most of your HF privileges require morse code communications only, there is one ham band (10 meter) where you have limited voice and data/packet privileges.

The next step is the TECHNICIAN PLUS, or simply the Technician License where you have also passed the 5 word per minute Morse Code reception test. Or, you may have achieved this by having the Novice license first, and then took the Technician License written test. Anyway, the TECHNICIAN PLUS license has all the privileges of the Technician (full VHF/UHF), as well as the HF privileges of the Novice. This is a good all around beginners license if you can learn the Morse code.

The next step up is the GENERAL class license, with Advanced and Extra class licenses being more difficult to achieve than the General class but having slightly more HF band privileges than the General. The General class license has a much more demanding written test covering more electronic/radio theory, amateur radio regulations, and you must be able to receive Morse code at a minimum of 13 words per minute. These classes of licenses are more difficult to achieve than Novice or Technician, but give you more or less all amateur bands and privileges. Full HF/VHF/UHF.

The largest US amateur radio organization is the ARRL, or Amateur Radio Relay League. They are the most well known, if not always the most well liked organization (I like them, many don't). ARRL also has complete texts, study manuals, and morse code tapes to learn from. I still recommend Gordon West's study materials and tapes personally, I used his and many others and enjoyed Gordon West's style of teaching the most.

Your best bet is to find your local amateur radio store, talk with them, and/or buy several amateur radio magazines and read the ads for learning materials. These magazines include 'CQ', '73', 'QST', and 'Radio Fun'.

Have fun!

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~~~~~  
Jerry Bransford  
Silicon Graphics

(619) 546-0409

~~~~~  
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Date: 18 Aug 93 20:11:11 GMT  
From: ogicse!hp-cv!sdd.hp.com!col.hp.com!fc.hp.com!perry@network.ucsd.edu  
To: info-hams@ucsd.edu

References <1993Aug12.005214.20557@pixar.com>, <CBxExw.2x@fc.hp.com>,  
<CByCqK.JE3@odin.corp.sgi.com>  
Subject : Re: Code learning questions

Charles Adams (adams@chuck.dallas.sgi.com) wrote:  
: In article <CBxExw.2x@fc.hp.com>, perry@fc.hp.com (Perry Scott) writes:  
: ...more deleted...  
: |> Wheel-of-Fortune(tm) method. Part of learning higher speeds is to  
: |> abandon the anal-retentive idea of copying every character. If the  
: |> letter doesn't immediately come to mind, forget it - it's better than  
: |> trying to remember it and missing the next two. Later analysis of your  
  
: ---good advice. if you copy 100%, you're going too slow. speed up.

This is the truth.

I increased the speed when I achieved 90% accuracy. In retrospect,  
maybe 90% is too high.

Perry  
AA0ET

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End of Info-Hams Digest V93 #989  
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